

EUI Working Paper ECO No. 96/8

A Follow-Up Survey of
Unemployment Insurance
Exhausters in Hungary

JOHN MICKLEWRIGHT
and
GYULA NAGY

EUI WORKING PAPERS



EUROPEAN UNIVERSITY INSTITUTE

NP 330
EUR

EUROPEAN UNIVERSITY INSTITUTE



3 0001 0026 6883 0

EUROPEAN UNIVERSITY INSTITUTE, FLORENCE

ECONOMICS DEPARTMENT



EUI Working Paper ECO No. 96/8

**A Follow-Up Survey of
Unemployment Insurance Exhausters in Hungary**

**JOHN MICKLEWRIGHT
and
GYULA NAGY**

BADIA FIESOLANA, SAN DOMENICO (FI)

All rights reserved.
No part of this paper may be reproduced in any form
without permission of the authors.

© John Micklewright and Gyula Nagy
Printed in Italy in May 1996
European University Institute
Badia Fiesolana
I – 50016 San Domenico (FI)
Italy

A FOLLOW-UP SURVEY OF UNEMPLOYMENT INSURANCE EXHAUSTERS IN HUNGARY

John Micklewright

European University Institute, Florence
and
Queen Mary and Westfield College, London

Gyula Nagy

Budapest University of Economics

March 1996

Abstract

The single most likely way to leave the unemployment insurance (UI) register in Hungary is not by getting a job but simply by running out of entitlement to benefit. This situation raises two questions. First, what are the implications of the cessation of UI for living standards? Second, does UI exhaustion have much effect on the probability of getting a job? This paper reports on preliminary analysis of these issues with a survey of persons exhausting entitlement to UI in Summer 1995.

Acknowledgements

This research was financed by the ILO/Japan Project on Employment Policies in Hungary. We are indebted to Martin Godfrey, the co-ordinator of the project, for his support. We thank the National Labour Centre for much assistance with the survey and especially György Lázár and Zsuzsa Sági.

1. INTRODUCTION

As in other countries in Central and Eastern Europe and in common with most OECD countries, Hungary has relied on limited-duration Unemployment Insurance (UI) as the primary form of income support for the unemployed. However, a low outflow rate from unemployment coupled with progressive reductions in entitlement periods to UI have resulted in exhaustion of UI entitlement becoming a very common event. Indeed, the single most likely way for an entrant to the UI register to leave it is not by getting a job but simply by running out of entitlement to benefit. This situation is illustrated in Figure 1, which shows the monthly outflow rate from the stock of UI recipients to jobs and the outflow for other reasons among which exhaustion of entitlement overwhelmingly dominates. On average only about 5 percent of the stock of UI recipients left the register each month to get a job in 1994 and the first half of 1995, while the total outflow rate was about 15 percent. The diagram also shows the increasing importance of exhaustion - there is a growing gap between the total outflow rate and the re-employment rate.

This situation raises two related sets of questions. First, what are the implications of the cessation of UI for living standards? How many of those that exhaust UI go on to receive income-tested Social Benefit (SB) and what other sources of income support within the household exist for those that do not? Second, does UI exhaustion have much effect on the probability of getting a job? Are UI recipients more likely to leave the register as the day their benefit runs out approaches? Is there a sudden surge in the probability of finding a job when benefit actually expires?

Hitherto it has not been possible to answer these questions adequately. Social Benefit is a comparatively new scheme in Hungary and few administrative data exist on its receipt, despite this benefit now being received by more registered unemployed persons than is UI. Analysis of benefit receipt and outflows using UI register data, as in our earlier work, answers a number of questions about the behaviour of those receiving UI but since observation finishes by definition at the point of UI exhaustion it can say nothing about what happens beyond that point.

This situation provided the motivation for the survey on which this paper reports. Section 2 describes the data collected. In a nutshell, a cohort of individuals starting UI receipt in the Spring of 1994 were followed through the UI registers over the following 12 months. A large sample of those exhausting UI entitlement were contacted and interviewed about 3–4 months after their UI expired.

Information was collected on their labour market experiences since exhaustion, on their household characteristics, and on claims and receipt of SB. In Sections 3 and 4 we use simple non-parametric methods to analyse the probability of leaving unemployment to get a job (Section 3) or to go to some other destination (Section 4). In both cases we analyse the full inflow cohort, joining the follow-up survey data to those from the UI register. In this way we are able to compare the probabilities of exit before and after expiry of UI entitlement. Section 5 looks at SB, showing the frequency of receipt of this benefit and the characteristics of those who do receive. Section 6 concludes, summarising what has been learnt and what conclusions can be drawn for policy and outlining the ways in which the preliminary analysis presented in this paper needs to be developed.

2. UI REGISTER DATA AND THE EXHAUSTER SURVEY

Construction of the data base we use was in two stages, which we begin by outlining. First, we selected all persons in two work history groups who entered the UI register in April or May 1994, a group of about 28,000 individuals. These individuals were followed through the UI register for one year. Second, a subsample of those individuals in this inflow cohort who exhausted UI entitlement was interviewed in Summer 1995 about 3–4 months after exhaustion. We now put more details on this outline.

Eligibility to benefit in the Hungarian UI system depends on employment history in the four years prior to a claim. At least 12 months employment is required to qualify for benefits. The period of entitlement then depends on the length of the work record; 12 month employment results in the minimum of 3 months of entitlement, 4 years employment brings the maximum of 1 year of entitlement. There are ten different entitlement periods in all (including the minimum and

maximum). An individual cannot be followed in the UI benefit register beyond the end of the entitlement period - it is a register of UI benefit payments and not a register of unemployment more widely defined. This is an important drawback of using register data for analysis of outflows from unemployment and one motivation for conducting a follow-up survey among UI exhausters was to extend the period of observation beyond the end of the entitlement period.

We concentrated on the two groups in the April/May 1994 inflow to UI with the longest entitlement periods, of 12 and 11 months, which result from work histories in the four years prior to claim of continuous employment and 43-47 months employment respectively. These groups accounted for nearly two-thirds of the total inflow, with the maximum entitlement group alone representing nearly half. The alternative strategy of sampling each group would have led to a small sample size in many eligibility groups. It would also have greatly extended the period over which we observed exhaustion of UI and this would have caused problems for field-work, given that we wished to ensure that interviews on the post-exhaustion employment history took place not too long after the date of exhaustion so as to reduce recall errors.

These two work history groups were followed through the UI registers, noting exits as and when they occurred. (All individuals in the inflow cohort in the two relevant work history groups enter the data base that we constructed.) The following information on the individuals and their UI claims was taken from the register: sex, age, educational level, region (county), local employment office, way of termination of last employment, work history in last 4 years used to determine UI entitlement, previous earnings figure used to determine UI, UI benefit level, reason of end of benefit payments, and length of benefit spell.

We then conducted a follow-up survey in Summer 1995 of the 12,600 persons that exhausted entitlement. These persons represented 44 percent of the original inflow in the two entitlement groups concerned. Financial restrictions forced us at this point to take a (stratified) random sub-sample of individuals to include in the survey, and we used sampling fractions of about 30 percent for the 12 month entitlement group and 60 percent for the 11 month group. Individuals were traced to their home addresses (contained in the UI register) and interviews were conducted

with a total of 4,661 individuals, which represented a response rate of nearly 90 percent. In 6 percent of cases the interviewer did not find the person at home (we tried to contact everybody at least twice). The potential respondents moved to an unknown new address in 2.5 percent of the cases. There were only a very small number of refusals: 0.6 percent of the sample. The rest of unsuccessful interviews (1.3 percent) are due to other reasons, eg. the person was not known at the address or the address did not exist.

Interviews were conducted between 9 and 27 weeks after the date of UI exhaustion (the mean lag was 18 weeks). Respondents were asked to report their labour market status in each fortnight since the date of UI exhaustion, and additionally to report the precise date that a job was first found, excluding casual work. The outcome of any claim to SB was recorded. We also collected information on household composition and labour force status of other members of the household together with the current earnings, if any, of the respondent and spouse.

Interviewing was conducted by local employment office clerks, except in Budapest and several large towns where we used a professional survey agency (about 1 in 6 individuals in the survey lived in these areas). This restricted the range of questions we felt we could ask if we were going to maintain the goodwill of respondents. The surveyed individual himself or herself provided the information requested in 81 percent of cases if male and 92 percent of cases if female. In other cases another household member provided the information (almost always the spouse).

Table 1 compares a number of observed personal characteristics of (i) the total inflow in the two work history groups, (ii) all those in these groups who exhausted UI, and (iii) the sub-set of exhausters who were survey respondents. The comparisons are made separately for the two eligibility groups. Differences between (i) and (ii) reflect differences between the characteristics of those who leave the register to a job or some other destination and those who exhaust UI. For example, those who exhaust tend to have lower education, are more likely to have left their last job voluntarily, and are more likely to live in high unemployment counties. In the case of the 11 month eligibility group, comparison of exhausters selected for and responding to the follow-up survey and those not in the survey sample show no significant differences in observed personal characteristics, including mean values

of last gross earnings and last UI payment. Although there are again no differences in distributions of characteristics such as gender, education, region etc. for the 12 months eligibility group, respondents do have slightly lower past earnings and hence UI benefits and these differences are significant at the 5 percent level. With this small proviso, the sample therefore seems representative of all exhausters.

3. THE PROBABILITY OF GETTING A JOB

We begin by looking at the probability of getting a job in the period prior to the expiry of UI entitlement, distinguishing between men and women and between those with 360 days of UI entitlement and those with 330 days. Taking the two groups together, 29 percent of spells finish in a job exit (compared to 44 percent in exhaustion). The figure is much higher for men than for women - 34 percent compared to 25 percent.

Results are shown in Figures 2-5 and are based on the full inflow cohort in March and April 1994 in the two entitlement groups. These figures show the probability of leaving the UI register to take up work in a given interval of time conditional on having survived in the register to the start of that interval, i.e. the hazard of exit to a job. The intervals are defined as one week long for those with 360 days of entitlement and two weeks in the case of 330 days. Results are obtained using the Kaplan-Meier non-parametric estimator, treating spells of UI that finish in exit to states other than work as being censored at the point of exit. The vertical lines in the diagrams show the 95 percent confidence intervals for the estimates of the hazard. A job is defined to include both employment and self-employment that are subsidised by the state, as well as "normal" jobs that receive no subsidy (normal jobs make up the great majority).

Looking first at men with 360 days of entitlement (Figure 2), we see that the hazard is fairly flat for most of the period. There is a bit of a dip around the 200 day mark, which falls near the end of the calendar year (a period when hiring is less frequent) but the most notable variation comes right at the end of the period. The hazard four and two weeks prior to exhaustion is about 50 percent higher than for most of the entitlement period and that in the final week is about double the usual

level. The size of the confidence intervals show that these are certainly significant changes. Turning to women with the same entitlement period (Figure 3), there is an even bigger rise in the final week, the hazard here being some three times higher than in most earlier periods. The final 4-6 weeks in general has a higher hazard too and there is some indication of a rising hazard through much of the last three months. In general the women have lower hazards compared to the men, which is what we expected from earlier work - the outflow rate of women is lower than that of men. Figures 4 and 5 for claimants with 330 days entitlement show some results that are in common with Figures 2 and 3 and some that are different. Men again display a rise in the hazard in the final period, now defined as two weeks long, and in fact it appears to rise progressively from the 200 day mark. Women with 330 days entitlement, however, appear to display little or no rise in the hazard at all as the ending of entitlement draws near.

These results are not dissimilar to those we have obtained in earlier work with other inflow cohorts of UI recipients and indicate that although the hazard does rise somewhat as the point of UI exhaustion approaches, the changes are not that great. However, as with the earlier work, these results tell us nothing about what happens after UI is finished. Figures 6 to 9 address this issue, using the data from the follow-up survey of exhausters. The hazards in the first 12 months (Figures 6 and 7) or 11 months (8 and 9) are estimated using the full inflow with these periods of entitlement, as in Figures 2-5. Beyond this point the hazards are estimated using the exhauster survey data. Spells for those persons exhausting entitlement who were not included in the survey are treated as censored at the point of exhaustion. The less than 100 percent sampling rate in the survey explains why the confidence intervals jump in size at this point. Intervals for estimation for the hazard are again taken as one week long. Prior to exhaustion we are modelling exit from the UI register; following exhaustion we treat as remaining in the "base state" (and hence still "at risk" of exit to a job) individuals who report in the period concerned that they were in one of three categories: (i) did casual work (with or without job search), (ii) looked for a job but could not find one, (iii) did not look for a job or were not able to work. (All other exits are treated as censoring.) A job exit pre-exhaustion is defined as before. Post-exhaustion, the states in the survey that we consider as exit to a job

are working as an employee, self-employment, and working in a family business. We do not include casual work in the definition of a job exit since this can only be identified post-exhaustion. And we expect that casual work performed pre-exhaustion is most likely to be done illicitly, while still in receipt of UI.

Among UI exhausters in the survey, exit to a job accounts for 23 percent of all recorded exits and as in the pre-exhaustion period (although the difference is not as great) the figure is greater for men than for women - 25 percent compared to 21 percent. (These percentages are based on weighted data to take account of the oversampling of those with 330 days of UI entitlement.)

Starting again with men with 360 days entitlement (Figure 6) we see that the rise in the final month is nothing compared to the huge jump in the hazard in the first week following exhaustion. The hazard in this week is some six to seven times higher than in earlier periods. It then immediately falls back to around a level similar to that in the last week of UI for the next four weeks. Thereafter the hazard oscillates around a level about 25 percent higher than during most of the period when UI was being paid. Figures 7-9 demonstrate the same surge in the hazard for the week immediately following exhaustion for women and for those with 330 days of UI entitlement and the order of magnitude of the rise is similar - about a five to seven-fold jump. And again, following this first post-exhaustion week, the hazard immediately falls back to a level that typically is similar to that in the final weeks of UI entitlement before settling down to a level somewhat above that in much of the entitlement period.

As many as 30 percent of all recorded post-exhaustion job exits come in the first week following exhaustion and many of these are on the first day. It seems clear that there is a group of persons who are timing their return to work to coincide exactly with the point of UI exhaustion, but it is important to keep the size of this group in perspective. If we take all job exits right from the start of UI receipt up until our survey date (weighting the post-exhaustion exits to take account of the sampling from that point), the "week 53" exits account for 8 percent, or only 2 percent of the entire entry cohort. One possibility is that only these exits would be affected greatly by changes in the UI entitlement period - we have seen that the post-exhaustion hazard falls back quickly to around its pre-exhaustion level and the pre-exhaustion

hazards have a fairly flat profile. This suggests that changes in UI duration or benefit levels would be a very crude tool with which to change incentives for the persons concerned and that a more appropriate policy response would be to try to identify these claimants early on in their UI spells and disqualify them from benefit or at least administer their claims in such a way as to pressurise them into earlier exits.

4. OTHER EXITS

We now look at exits to other labour market states and see how the probability of this happening changes before and after the point of UI exhaustion. Figures 10 (360 days entitlement) and 11 (330 days entitlement) show the estimated hazards for exits to a mixed collection of labour market states, where in this case we have straightaway combined the UI register data with those from the follow-up survey. The hazards are estimated pooling the data for men and women, taking two-week intervals. The states included in other exits are given below, and are chosen so as to be as comparable as possible pre- and post-exhaustion. (Exits to the child care benefits GYES and GYED cannot be identified separately pre-exhaustion from benefit suspensions, which may occur for various reasons, and spells that end this way in the pre-exhaustion period are treated as censored.) The base state remains the same as before, with exits to jobs now treated as censoring.

Pre-exhaustion	pension early retirement training public work scheme disqualification from UI receipt child care allowance (GYET)
Post-exhaustion	pension training public work scheme child care benefit/allowance (GYES, GYED, GYET)

Pre-exhaustion, these other exits account for 21 percent of all exits (including exhaustion). In contrast to job exits, the figure is much higher for women - 28 percent compared to 15 percent for men. Post-exhaustion (using weighted data) other exits account for 11 percent of all spells (including those where the individual

is still in the base state at interview) with the figures for men and women being 10 and 12 percent respectively.

The figures display similar features. There is an enormous rise in the hazard at 6 months into the period of UI entitlement and then again in the interval immediately following exhaustion. For those with 360 days entitlement, the spike at 6 months is larger while the opposite is true for those with 330 days. The spike at 6 months is caused by exit to early retirement - 6 months's receipt of UI is required before an individual qualifies for early retirement. However, not all early retirement happens at this point - only about 40 percent. The second spike is caused largely by exit to disability pension and, in the case of women, to receipt of child care payments.

We finish this section by looking at the distribution of the follow-up survey sample across *all* recorded labour market states at two points in time, the fortnight immediately following UI exhaustion and the three month point, distinguishing between men and women. Table 2 covers both those who received 12 months UI and those who received 11 months (with appropriate weighting to take account of the different sampling fractions). (The figures at the 3 month point exclude 5 percent of the sample who are traced for shorter periods in the survey.)

Immediately post-exhaustion, 7 percent of the sample report doing casual work and many of these could of course have also been doing such work while receiving UI. Casual work is clearly more common among men than women. Consistent with the Labour Force Survey results presented in Micklewright and Nagy (1995), a higher proportion of women report that they were not looking for work - 14 percent compared to 8 percent of men. Around 70 percent of both men and women report that they were looking for work. The big change at the three month point is that more persons are employed - 17 percent overall and slightly more common for men than women - and fewer persons are as a consequence searching. The numbers doing casual work or explicitly reporting no search are very similar to the situation immediately post-exhaustion.

5. RECEIPT OF SOCIAL BENEFIT

We now look at the receipt of SB. Table 3 shows that 48 percent of all persons in the survey were either in receipt at the date of interview or had received this benefit at some time since exhausting UI. This is our estimate of the unconditional probability of receiving SB following a spell of UI for the two-thirds of the UI inflow with maximum or near maximum UI entitlement. The probabilities are very similar for men and women. Among the rest of the sample, 13 percent had claimed but not received benefit and 39 percent had never claimed.

Eligibility for SB depends on a test of household income per capita, but if eligibility is awarded SB is paid at single flat-rate equal to 80 percent of the minimum pension. Since the level of UI varies (it is a complicated piece-wise linear function of past wages - see Micklewright and Nagy, 1994) the level of SB relative to UI previously paid does however vary. Information on this is given in Table 4. On average, SB replaces just over two-thirds of UI for men and just over three-quarters for women. The higher figure for women is on account of their lower levels of UI which in turn reflect lower wages when in work. A quarter of SB recipients lose comparatively little benefit when switching from UI to SB - the top quartile of the distribution is over 80 percent in both cases. Another quarter, on the other hand, lose about half their benefit (men) or a third (women).

Table 5 shows the reasons for non-receipt reported by the 13 percent of individuals who claimed SB unsuccessfully. The most important reason by a long way is that family income was too high, in other words the income-test was failed. This accounts for 60 percent of unsuccessful claims by men and 76 percent by women. The higher figure for women is in line with the gender differences in earnings and labour force participation - women are more likely to be married to men who work than vice versa and husbands' earnings are higher on average than wives. Some 5 percent of claimants report finding a job before their claim was determined and another 10 percent report that the decision was still to be made. Decisions on SB claims are taken at what are typically monthly meetings of village councils, so it is quite possible to have to undergo a wait for a decision.

This leaves the 40 percent of UI exhausters who did not make any claim to SB. The reasons they report for not doing this are given in Table 6. Overall, 1 in 5 say they did not do so because their family income was too high, and as in Table 5 the figure is notably higher for women. A larger proportion of women than men said they did not claim because of their own income - 19 percent compared to 12 percent - which is rather surprising, and inconsistent, for example, with the higher incidence of casual work among men than women shown in Table 2. The most important reported reason for not claiming SB however was a belief that a job would soon be found, and hence presumably that the procedure was not worth it. Very few persons reported that the procedure for making a claim was too complicated.

We summarise the characteristics of those receiving SB by estimating a binary logit model of the probability of receipt at any time following exhaustion. We restrict estimation to those who after two months were still in one of three categories treated as the base group for the estimation of the post-exhaustion hazard in Figures 6-11, namely doing casual work, looking for a job, or inactivity. We restrict the analysis to this group since we want to remove those persons who got jobs reasonably quickly (or moved to other labour market states) and thus had no need for SB. Thus estimated effects should largely reflect the probabilities of claim and qualification for those who are not excluded through regaining employment.

The explanatory variables are a mixture of continuous and dummy variables. The estimated marginal effect of turning on any dummy on the probability of receiving SB is approximated by dividing its estimated parameter by four (assuming a base probability of 0.5). When applied to the coefficient of the county unemployment rate, this calculation also gives an estimate of a one percentage point change in unemployment.

Age is entered in a quadratic which performs reasonably for men with a maximum at age 42 but which is quite insignificant for women. We are as yet unable to interpret this pattern. Increased educational level of the claimant has a strong negative effect for both sexes (somewhat better determined for men). Incomplete primary schooling (very common among the unemployed) raises the probability of SB compared to the base of primary schooling by some 20 percentage points for men and 30 points for women. Secondary schooling reduces the

probability for men by about 20 percent. We suspect this reflects, at least in part, higher earnings levels of household members other than the spouse who are employed (spouse's earnings are entered explicitly), which reduces the probability of passing the SB income-test. The number of employed household members not surprisingly has a strong negative impact, one such person reducing the SB probability by about 10 percent. The number of old age pensioners also has a negative impact which appears similar to that of employed persons, but this is misleading since we control explicitly for the earnings of the spouse. (When this earnings variable is excluded, the number of employed members has an effect that is double that of the number of pensioners, presumably since pensions bring in less income to the household than earnings.) Persons on "social incomes" (such as disability pension) again have a negative impact on the probability of receipt, but the impact is not great. The negative effect of what are often small increases in household income are in part compensated by the positive impact on increasing household size (qualification for SB depends on a test of *per capita* household income). By raising household size, dependent children should increase the probability of SB by their negative impact on per capita income but on the other hand should reduce it since a quite generous universal family allowance system exists in Hungary, which has a positive effect on family income. In practice, we see that the number of dependent children has a significant effect only for women (why this is the case is not clear) and it is negative, one child reducing the probability of receipt by up to 10 percent points. Marital status has a significant effect only for men however, and it is positive, although not very well determined.

The only income that we directly observe is the monthly earnings of the spouse and this has a very significant impact, as one would expect. The average value of this variable is about 21,000 forints for wives and 27,000 for husbands. Evaluating at these values and at the means of the dependent variable, the estimated elasticity of the probability of receiving SB to spouse's earnings is 0.34 for men and 0.64 for men.

Perhaps the greatest surprise is the effect of the county unemployment rate variable. We expected this to be insignificant, since we are controlling for most of the positive indirect effect on the SB probability that comes through the reduced

probability of getting a job (and hence increased need for SB) by excluding from estimation those who got a job within two months. The impact is quite large (and well-determined) - a one percentage point increase in unemployment increases the probability of getting SB by 3-4 percent (county unemployment rates range from 5 to 19 percent). Perhaps local governments are more lenient in their adjudication of claims in areas of high unemployment. Finally, controlling for unemployment rate, the SB probability seems to be notably higher in Budapest (by up to 10 percentage points), another result for which we as yet have no explanation.

6. SUMMARY AND FURTHER DIRECTIONS FOR RESEARCH

This paper has provided a technical report on our survey of UI exhausters and has given some very preliminary results. As regards the latter, the following points have emerged. It should be remembered that the survey was not a random sample of UI exhausters from all work history groups and was restricted to the two-thirds of individuals in the inflow with maximum or near maximum UI entitlement periods.

- The conditional probability of getting a job rises five- or six-fold in the week immediately following UI exhaustion before falling back to a level fairly similar to that in the last few weeks of UI receipt, which in turn appears a little higher than in earlier weeks. The number of individuals who get a job in the first post-exhaustion week are however rather small - only 2 percent of the full UI inflow cohort in the two relevant work history groups.

- There is also a big spike in the hazard of exit to labour market states other than work in the week following exhaustion, repeating a spike found at 6 months during the UI entitlement period. These spikes seem to be caused by persons moving off to other forms of income support, for example pensions or child care benefits, when the opportunity arises.

- Income tested Social Benefit (SB) was received by half of UI exhausters. Benefit income among those receiving SB fell on average at UI exhaustion by slightly less than one-third for men and one-quarter for women.

Further research with these data will follow several directions. First, we need to distinguish between the hazards of those eligible to SB and those who are not. The approach of UI exhaustion clearly should have different implications for these two groups. Second, we need to investigate the wages of those who obtain jobs, something we can only do with the follow-up survey sample. Those who obtain jobs immediately after UI exhaustion might be expected to have accepted wages at little more than their benefit level.

References

Lazar, Gy, and Szekely, J, (1994), "Report on the Follow-Up Survey of 1994 of Those Who Left the Unemployment Register" (in Hungarian), National Labour Centre, Budapest

Micklewright, J, and Nagy, Gy, (1994), "Flows To and From Insured Unemployment in Hungary", EUI Working Paper in Economics No 94/41

Micklewright, J, and Nagy, Gy, (1994a), "How Does the Hungarian Unemployment Insurance System Really Work?", Economics of Transition, vol 2, no 2

Micklewright, J, and Nagy, Gy, (1995), "Unemployment Insurance and Incentives in Hungary: Preliminary Evidence", CEPR Discussion Paper 1118, and in Newbery D (ed), Tax and Benefit Reform in Central and Eastern Europe, CEPR.

Micklewright, J, and Nagy, Gy, (1995a), "Evaluating Labour Market Policy in Hungary", paper presented at OECD/IHS/IFO workshop, Vienna, November, mimeo

Micklewright, J, and Nagy, Gy, (1996), "Labour Market Policy and the Unemployed in Hungary", European Economic Review, annual congress volume, forthcoming

TABLES

Table 1: Characteristics of UI recipients with 12 or 11 months eligibility period

	12 months eligibility period			11 months eligibility period		
	total inflow	exhaus- ters	respon- dents	total inflow	exhaus- ters	respon- dents
Percentages:						
Sex						
male	46.0	49.0	48.0	60.2	57.8	58.7
Education						
primary and below	39.8	40.3	40.4	34.4	40.4	40.1
vocational	33.2	35.6	36.0	40.3	38.5	38.9
secondary	23.7	21.9	21.4	21.5	18.7	18.8
higher	3.3	2.2	2.2	3.8	2.6	2.2
Termination of last employment						
job leaver	2.2	3.1	2.8	9.1	12.6	12.2
Region						
Budapest	10.3	9.5	8.7	17.1	16.6	16.5
highest unemploy- ment counties	17.3	22.0	22.1	14.7	17.8	17.4
Averages:						
Age (years)	40.2	37.9	37.7	35.7	35.8	35.6
Pre-unemployment (unindexed) gross earnings (forints)	19897	19020	18626*	19101	18559	18628
Last monthly net UI (forints)	10670	10206	10116*	10372	9937	10015
No. of observations	22611	9713	3141	6059	2697	1517

Note: An asterisk indicates that the difference between the averages of the sample and non-sample groups of exhausters is significant at the 5 percent level (using an F-test). Distributions by sex, education, termination of last employment and region were compared by chi-square tests and none of the differences proved significant.

Table 2. Labour Market State of UI Exhausters 1 Week and 3 Months after Date of Exhaustion

	1 week after exhaustion			3 months after exhaustion		
	Men	Women	Total	Men	Women	Total
Employment	5.5	5.3	5.4	18.1	15.3	16.7
Public work employment	0.3	0.0	0.1	2.0	0.5	1.3
Entrepreneur	1.5	0.4	1.0	2.8	1.5	2.1
Family worker	0.6	0.8	0.7	0.7	1.1	0.9
Casual worker searching for a job	8.7	3.2	6.0	8.2	2.4	5.3
Casual worker not searching for a job	1.0	0.7	0.9	1.2	0.7	0.9
Child and invalid care allowance	0.1	3.4	1.7	0.2	4.9	2.6
Pension	3.9	3.2	3.6	5.6	4.4	5.0
Student	0.0	0.1	0.1	0.1	0.2	0.2
Searching for a job	70.5	68.3	69.4	54.1	54.9	54.5
Not searching for a job	7.6	14.0	10.8	6.7	13.3	10.0
Training scheme participant	0.2	0.5	0.4	0.3	0.7	0.5

Source: 1995 UI Exhausters' Survey microdata

Note: Percentages are based on weighted data

Table 3. Social Benefit Receipt at Date of Interview

	Men	Women	Total
Received at date of interview	40.7	38.8	39.8
Received earlier	9.6	6.8	8.2
Unsuccessful claim	11.4	14.4	12.9
Did not claim	38.3	40.1	39.2
Total	100.0	100.0	100.0

Note: Percentages based on weighted data

Table 4. Level of Social Benefit at Date of Interview as a Percent of Unemployment Insurance previously received

	Men	Women
Bottom decile	48	54
Lower quartile	55	69
Median	68	83
Upper quartile	82	83
Top decile	83	84
Mean	68	77

Note: Percentages based on weighted data

Table 5. Reasons for Non-Receipt of Social Benefit if Claim Unsuccessful

	Men	Women	Total
Family income too high	60.1	75.6	68.7
Had own income	4.9	4.5	4.7
Found a job in a short time	6.8	3.6	5.0
Eligible for pension	3.3	1.8	2.4
Claim not yet determined	10.9	8.8	9.8
Other reason	9.1	3.0	5.7
Don't know/no answer	5.0	2.8	3.7
Total	100.0	100.0	100.0

Note: Percentages based on weighted data

Table 6. Reasons for Not Claiming Social Benefit

	Men	Women	Total
Family income too high	12.8	25.7	19.4
Had own income	12.3	18.6	15.5
Expected to find a job in a short time	45.9	28.6	37.1
Eligible for pension	10.0	7.4	8.5
Amount of SB too low	2.4	2.2	2.3
Procedure too complicated	3.9	4.6	4.2
Other reason	8.7	10.1	9.4
Don't know/no answer	4.3	2.9	3.7
Total	100.0	100.0	100.0

Note: Percentages based on weighted data

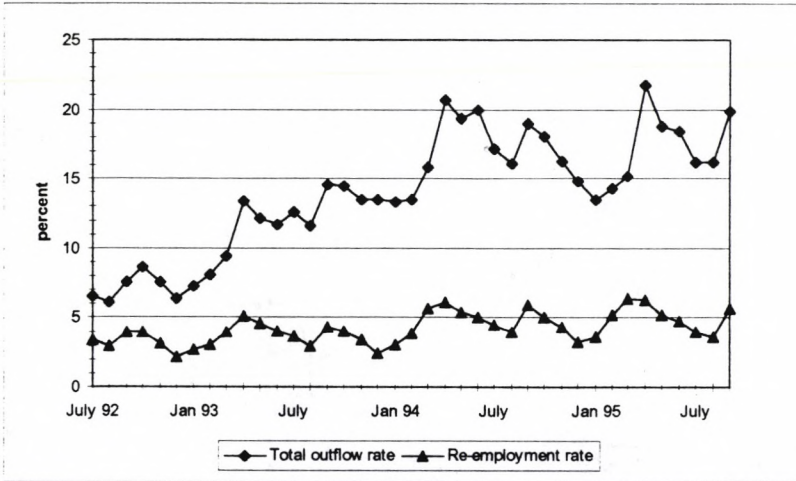
Table 7. Estimates of Logit parameters of Probability of SB Receipt for those still in "base category" after 2 months

	Men		Women	
	Coef.	t	Coef.	t
Constant	-3.692	-3.9	0.034	0.1
Age	0.168	3.7	0.022	-0.3
Age ²	-0.002	-3.1	-0.001	-0.7
Educational level				
incomplete primary	0.821	2.8	1.160	3.3
vocational	-0.398	-3.1	-0.169	-1.2
vocational secondary	-0.689	-3.5	-0.450	-2.6
general secondary	-0.731	-2.4	-0.248	-1.4
higher	-1.363	-3.4	-1.691	-3.0
County unemployment rate in June 1995	0.146	8.9	0.110	6.3
Budapest	0.450	2.2	0.471	2.3
Household characteristics				
no. of dependent children of respondent	0.091	1.3	0.377	4.8
no. employed	-0.492	-5.3	-0.438	-4.2
no. of old-age pension recipients	-0.448	-3.9	-0.540	-3.3
no. of regular social income recipients	-0.251	-2.0	-0.246	1.5
Married	0.249	1.6	-0.028	-0.2
Spouse working but wage not reported	-0.347	-0.9	-1.195	-4.5
Spouse's wage (000s of Forints)	-0.042	-5.8	-0.055	-10.0
No. of obs.	1774		1711	
Pseudo R ²	0.149		0.190	
Mean of dependent variable	0.62		0.57	

Note: Base category includes those in casual work, searching for a job, or inactive

FIGURES

Figure 1. Outflows from UI receipt, July 1992 – June 1995



- Notes: 1. Figures include Career Beginners benefit recipients
 2. Outflow rates are calculated in percentage of stock of UI recipients a) leaving for any reason including UI exhaustion b) leaving to a job

Figure 2. Pre-exhaustion job exit hazards of men with 12 months eligibility period

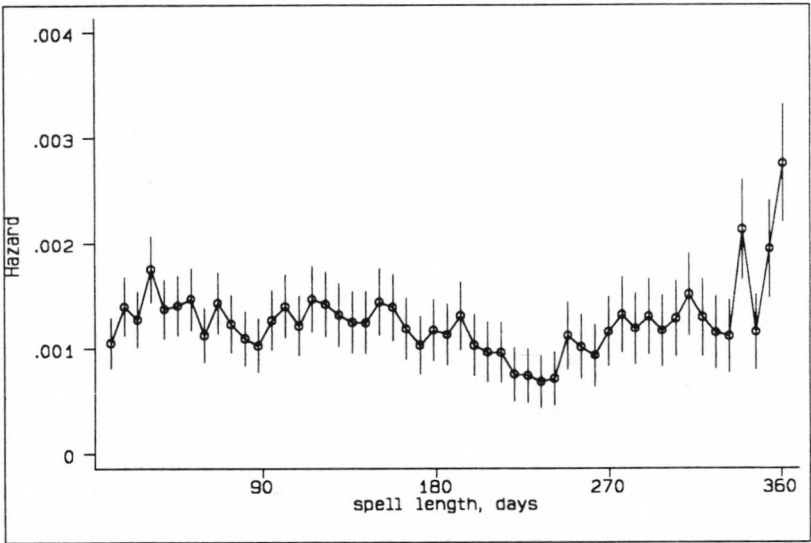


Figure 3. Pre-exhaustion job exit hazards of women with 12 months eligibility period

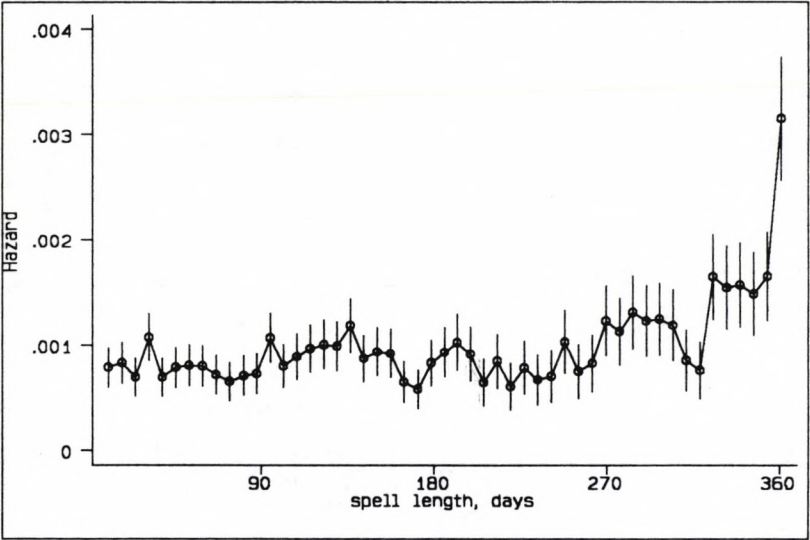


Figure 4. Pre-exhaustion job exit hazards of men with 11 months eligibility period

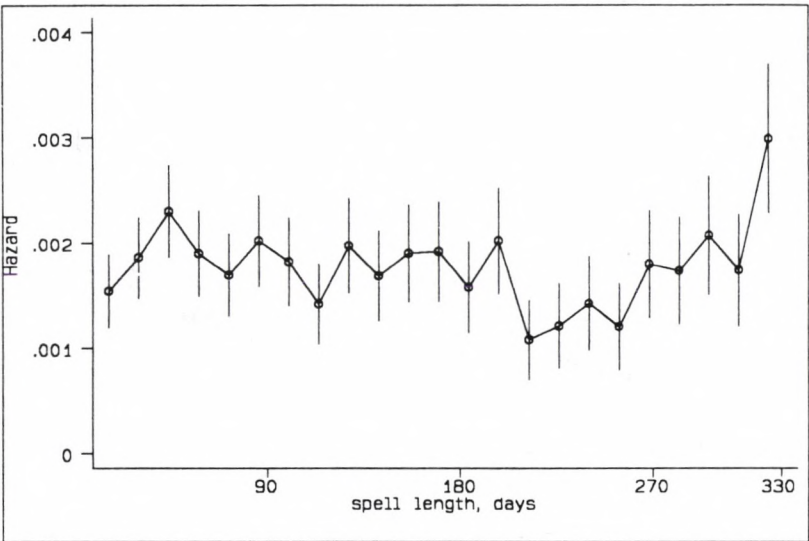


Figure 5. Pre-exhaustion job exit hazards of women with 11 months eligibility period

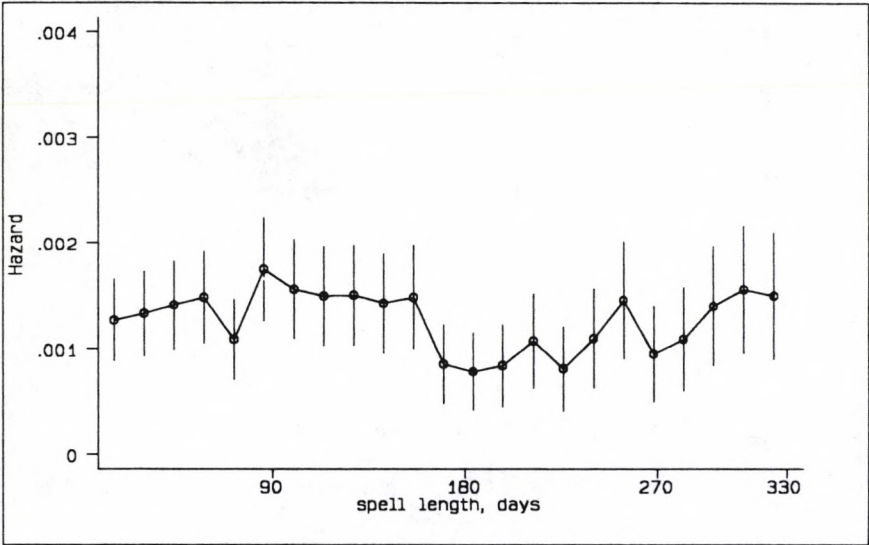


Figure 6. Pre- and post-exhaustion job exit hazards of men with 12 months eligibility period

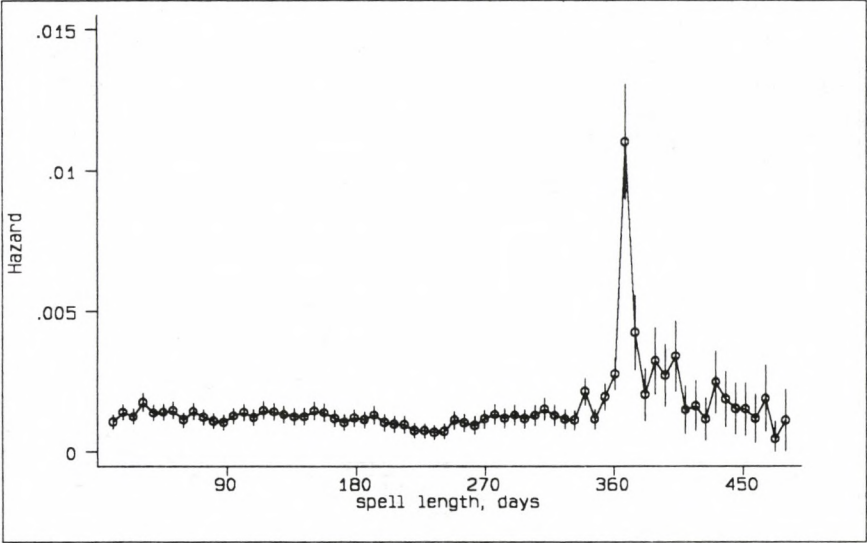


Figure 7. Pre- and post-exhaustion job exit hazards of women with 12 months eligibility period

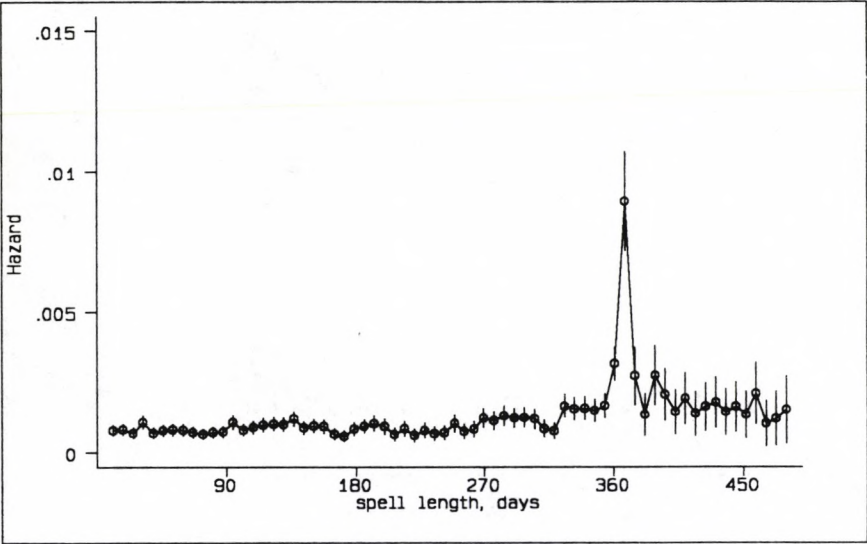


Figure 8. Pre- and post-exhaustion job exit hazards of men with 11 months eligibility period

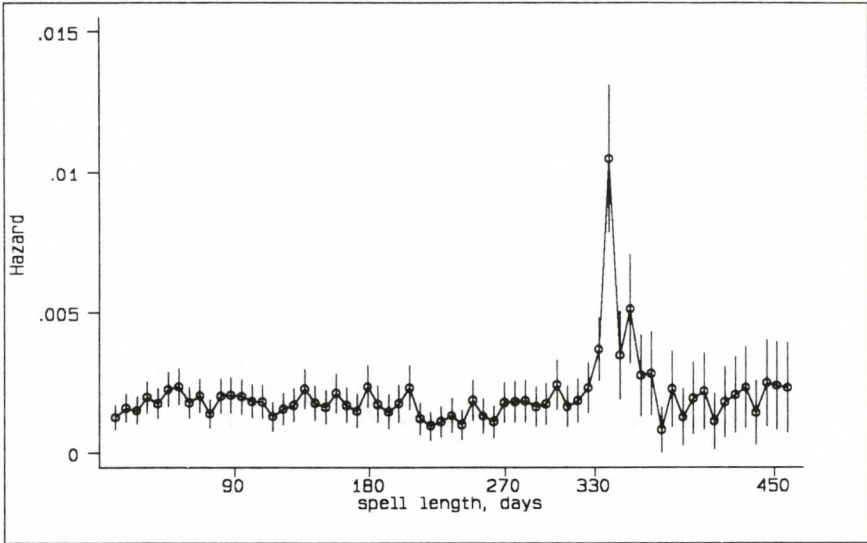


Figure 9. Pre- and post-exhaustion job exit hazards of women with 11 months eligibility period

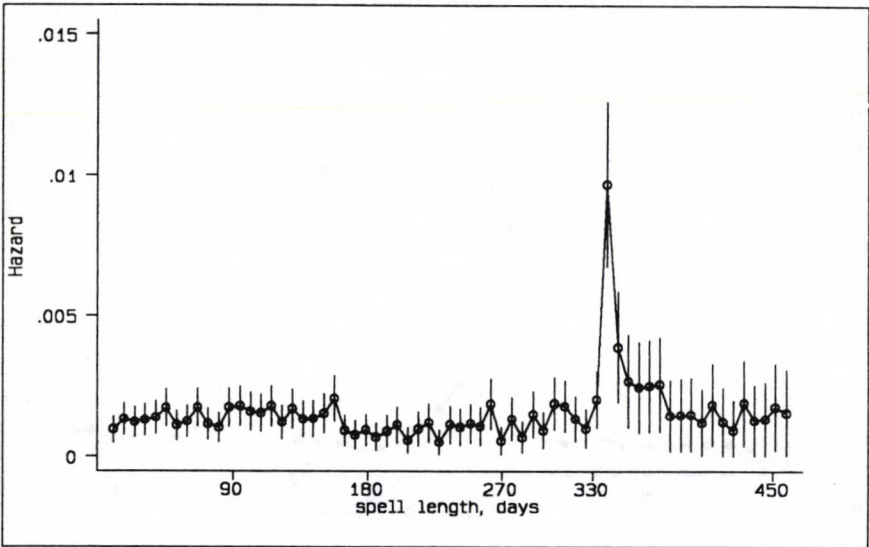


Figure 10. Pre- and post-exhaustion non-job exit hazards of both sexes with 12 months eligibility period

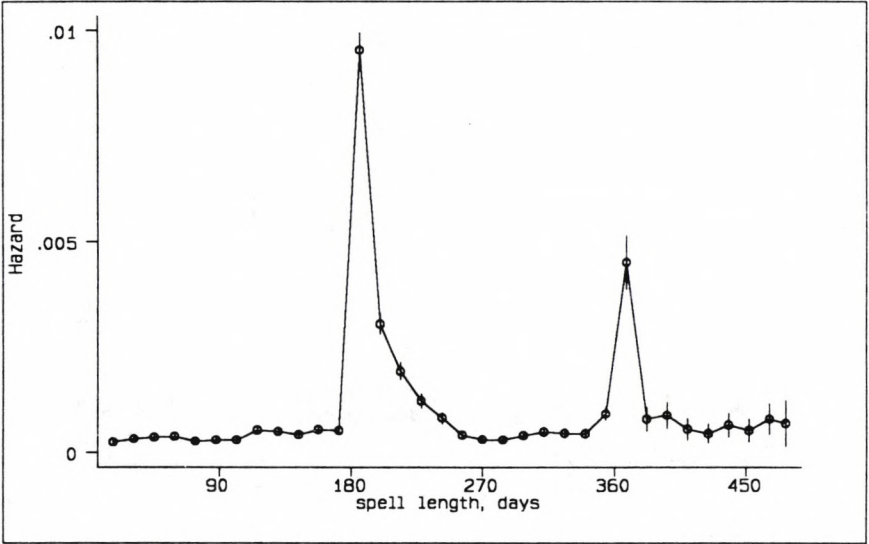
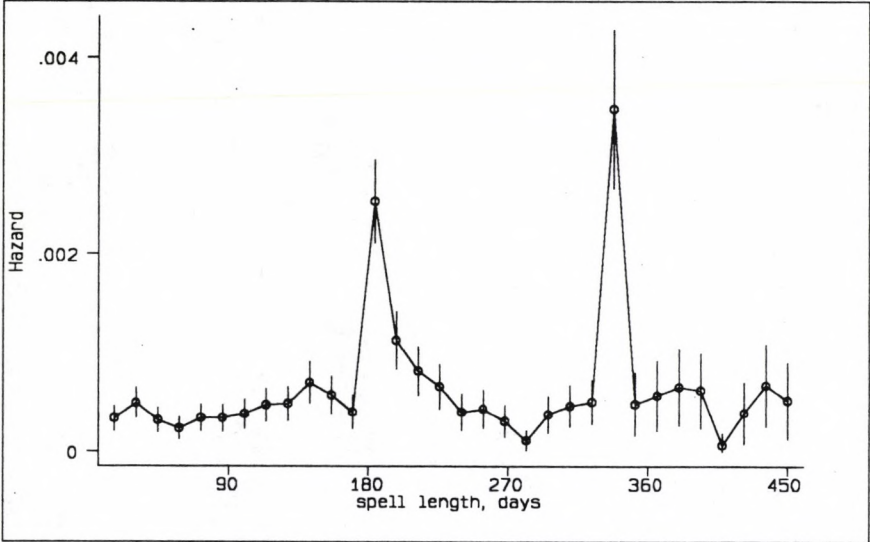


Figure 11. Pre- and post-exhaustion non-job exit hazards of both sexes with 11 months eligibility period





EUI WORKING PAPERS

EUI Working Papers are published and distributed by the
European University Institute, Florence

Copies can be obtained free of charge
– depending on the availability of stocks – from:

The Publications Officer
European University Institute
Badia Fiesolana
I-50016 San Domenico di Fiesole (FI)
Italy

Please use order form overleaf

Publications of the European University Institute

To The Publications Officer
 European University Institute
 Badia Fiesolana
 I-50016 San Domenico di Fiesole (FI) – Italy
 Telefax No: +39/55/4685 636
 E-mail: publish@datacomm.iue.it

From Name
 Address.....

- ☐ Please send me a complete list of EUI Working Papers
- ☐ Please send me a complete list of EUI book publications
- ☐ Please send me the EUI brochure Academic Year 1996/97

Please send me the following EUI Working Paper(s):

No, Author
Title:
No, Author
Title:
No, Author
Title:
No, Author
Title:

Date

Signature



**Working Papers of the Department of Economics
Published since 1994**

ECO No. 94/1

Robert WALDMANN
Cooperatives With Privately Optimal
Price Indexed Debt Increase Membership
When Demand Increases

ECO No. 94/2

Tilman EHRBECK/Robert
WALDMANN
Can Forecasters' Motives Explain
Rejection of the Rational Expectations
Hypothesis?

ECO No. 94/3

Alessandra PELLONI
Public Policy in a Two Sector Model of
Endogenous Growth *

ECO No. 94/4

David F. HENDRY
On the Interactions of Unit Roots and
Exogeneity

ECO No. 94/5

Bernadette GOVAERTS/David F.
HENDRY/Jean-François RICHARD
Encompassing in Stationary Linear
Dynamic Models

ECO No. 94/6

Luigi ERMINI/Dongkoo CHANG
Testing the Joint Hypothesis of Rational-
ity and Neutrality under Seasonal Coin-
tegration: The Case of Korea

ECO No. 94/7

Gabriele FIORENTINI/Agustín
MARAVALL
Unobserved Components in ARCH
Models: An Application to Seasonal
Adjustment

ECO No. 94/8

Niels HALDRUP/Mark SALMON
Polynomially Cointegrated Systems and
their Representations: A Synthesis

ECO No. 94/9

Mariusz TAMBORSKI
Currency Option Pricing with Stochastic
Interest Rates and Transaction Costs:
A Theoretical Model

ECO No. 94/10

Mariusz TAMBORSKI
Are Standard Deviations Implied in
Currency Option Prices Good Predictors
of Future Exchange Rate Volatility?
ECO No. 94/11
John MICKLEWRIGHT/Gyula NAGY
How Does the Hungarian Unemploy-
ment Insurance System Really Work? *

ECO No. 94/12

Frank CRITCHLEY/Paul
MARRIOTT/Mark SALMON
An Elementary Account of Amari's
Expected Geometry

ECO No. 94/13

Domenico Junior MARCHETTI
Procyclical Productivity, Externalities
and Labor Hoarding: A Reexamination of
Evidence from U.S. Manufacturing

ECO No. 94/14

Giovanni NERO
A Structural Model of Intra-European
Airline Competition

ECO No. 94/15

Stephen MARTIN
Oligopoly Limit Pricing: Strategic
Substitutes, Strategic Complements

ECO No. 94/16

Ed HOPKINS
Learning and Evolution in a
Heterogeneous Population

ECO No. 94/17

Berthold HERRENDORF
Seigniorage, Optimal Taxation, and Time
Consistency: A Review

ECO No. 94/18

Frederic PALOMINO
Noise Trading in Small Markets *

ECO No. 94/19

Alexander SCHRADER
Vertical Foreclosure, Tax Spinning and
Oil Taxation in Oligopoly

*out of print

ECO No. 94/20

Andrzej BANIAK/Louis PHILIPS
La Pléiade and Exchange Rate Pass-Through

ECO No. 94/21

Mark SALMON
Bounded Rationality and Learning;
Procedural Learning

ECO No. 94/22

Isabelle MARET
Heterogeneity and Dynamics of
Temporary Equilibria: Short-Run Versus
Long-Run Stability

ECO No. 94/23

Nikolaos GEORGANTZIS
Short-Run and Long-Run Cournot
Equilibria in Multiproduct Industries

ECO No. 94/24

Alexander SCHRADER
Vertical Mergers and Market Foreclosure:
Comment

ECO No. 94/25

Jeroen HINLOOPEN
Subsidising Cooperative and Non-
Cooperative R&D in Duopoly with
Spillovers

ECO No. 94/26

Debora DI GIOACCHINO
The Evolution of Cooperation:
Robustness to Mistakes and Mutation

ECO No. 94/27

Kristina KOSTIAL
The Role of the Signal-Noise Ratio in
Cointegrated Systems

ECO No. 94/28

Agustín MARAVALL/Víctor GÓMEZ
Program SEATS "Signal Extraction in
ARIMA Time Series" - Instructions for
the User

ECO No. 94/29

Luigi ERMINI
A Discrete-Time Consumption-CAP
Model under Durability of Goods, Habit
Formation and Temporal Aggregation

ECO No. 94/30

Debora DI GIOACCHINO
Learning to Drink Beer by Mistake

ECO No. 94/31

Víctor GÓMEZ/Agustín MARAVALL
Program TRAMO "Time Series
Regression with ARIMA Noise, Missing
Observations, and Outliers" -
Instructions for the User

ECO No. 94/32

Ákos VALENTINYI
How Financial Development and
Inflation may Affect Growth

ECO No. 94/33

Stephen MARTIN
European Community Food Processing
Industries

ECO No. 94/34

Agustín MARAVALL/Christophe
PLANAS
Estimation Error and the Specification of
Unobserved Component Models

ECO No. 94/35

Robbin HERRING
The "Divergent Beliefs" Hypothesis and
the "Contract Zone" in Final Offer
Arbitration

ECO No. 94/36

Robbin HERRING
Hiring Quality Labour

ECO No. 94/37

Angel J. UBIDE
Is there Consumption Risk Sharing in the
EEC?

ECO No. 94/38

Berthold HERRENDORF
Credible Purchases of Credibility
Through Exchange Rate Pegging:
An Optimal Taxation Framework

ECO No. 94/39

Enrique ALBEROLA ILA
How Long Can a Honeymoon Last?
Institutional and Fundamental Beliefs in
the Collapse of a Target Zone

ECO No. 94/40

Robert WALDMANN
Inequality, Economic Growth and the
Debt Crisis

ECO No. 94/41

John MICKLEWRIGHT/
Gyula NAGY
Flows to and from Insured
Unemployment in Hungary

ECO No. 94/42

Barbara BOEHNLEIN
The Soda-ash Market in Europe:
Collusive and Competitive Equilibria
With and Without Foreign Entry

ECO No. 94/43

Hans-Theo NORMANN
Stackelberg Warfare as an Equilibrium
Choice in a Game with Reputation Effects

ECO No. 94/44

Giorgio CALZOLARI/Gabriele
FIORENTINI
Conditional Heteroskedasticity in
Nonlinear Simultaneous Equations

ECO No. 94/45

Frank CRITCHLEY/Paul MARRIOTT/
Mark SALMON
On the Differential Geometry of the Wald
Test with Nonlinear Restrictions

ECO No. 94/46

Renzo G. AVESANI/Giampiero M.
GALLO/Mark SALMON
On the Evolution of Credibility and
Flexible Exchange Rate Target Zones *

ECO No. 95/1

Paul PEZANIS-CHRISTOU
Experimental Results in Asymmetric
Auctions - The 'Low-Ball' Effect

ECO No. 95/2

Jeroen HINLOOPEN/Rien
WAGENVOORT
Robust Estimation: An Example

ECO No. 95/3

Giampiero M. GALLO/Barbara PACINI
Risk-related Asymmetries in Foreign
Exchange Markets

ECO No. 95/4

Santanu ROY/Rien WAGENVOORT
Risk Preference and Indirect Utility in
Portfolio Choice Problems

ECO No. 95/5

Giovanni NERO
Third Package and Noncooperative
Collusion in the European Airline
Industry *

ECO No. 95/6

Renzo G. AVESANI/Giampiero M.
GALLO/Mark SALMON
On the Nature of Commitment in Flexible
Target Zones and the Measurement of
Credibility: The 1993 ERM Crisis *

ECO No. 95/7

John MICKLEWRIGHT/Gyula NAGY
Unemployment Insurance and Incentives
in Hungary

ECO No. 95/8

Kristina KOSTIAL
The Fully Modified OLS Estimator as a
System Estimator: A Monte-Carlo
Analysis

ECO No. 95/9

Günther REHME
Redistribution, Wealth Tax Competition
and Capital Flight in Growing
Economies

ECO No. 95/10

Grayham E. MIZON
Progressive Modelling of
Macroeconomic Time Series: The LSE
Methodology *

ECO No. 95/11

Pierre CAHUC/Hubert KEMPF
Alternative Time Patterns of Decisions
and Dynamic Strategic Interactions

ECO No. 95/12

Tito BOERI
Is Job Turnover Countercyclical?

ECO No. 95/13

Luisa ZANFORLIN
Growth Effects from Trade and
Technology

ECO No. 95/14

Miguel JIMÉNEZ/Domenico
MARCHETTI, jr.
Thick-Market Externalities in U.S.
Manufacturing: A Dynamic Study with
Panel Data

*out of print

ECO No. 95/15

Berthold HERRENDORF
Exchange Rate Pegging, Transparency,
and Imports of Credibility

ECO No. 95/16

Günther REHME
Redistribution, Income cum Investment
Subsidy Tax Competition and Capital
Flight in Growing Economies

ECO No. 95/17

Tito BOERI/Stefano SCARPETTA
Regional Dimensions of Unemployment
in Central and Eastern Europe and Social
Barriers to Restructuring

ECO No. 95/18

Bernhard WINKLER
Reputation for EMU - An Economic
Defence of the Maastricht Criteria

ECO No. 95/19

Ed HOPKINS
Learning, Matching and Aggregation

ECO No. 95/20

Dorte VERNER
Can the Variables in an Extended Solow
Model be Treated as Exogenous?
Learning from International Comparisons
Across Decades

ECO No. 95/21

Enrique ALBEROLA-ILA
Optimal Exchange Rate Targets and
Macroeconomic Stabilization

ECO No. 95/22

Robert WALDMANN
Predicting the Signs of Forecast Errors *

ECO No. 95/23

Robert WALDMANN
The Infant Mortality Rate is Higher
where the Rich are Richer

ECO No. 95/24

Michael J. ARTIS/Zenon G.
KONTOLEMIS/Denise R. OSBORN
Classical Business Cycles for G7 and
European Countries

ECO No. 95/25

Jeroen HINLOOPEN/Charles VAN
MARREWIK
On the Limits and Possibilities of the
Principle of Minimum Differentiation

ECO No. 95/26

Jeroen HINLOOPEN
Cooperative R&D Versus R&D-
Subsidies: Cournot and Bertrand
Duopolies

ECO No. 95/27

Giampiero M. GALLO/Hubert KEMPF
Cointegration, Codependence and
Economic Fluctuations

ECO No. 95/28

Anna PETTINI/Stefano NARDELLI
Progressive Taxation, Quality, and
Redistribution in Kind

ECO No. 95/29

Ákos VALENTINYI
Rules of Thumb and Local Interaction *

ECO No. 95/30

Robert WALDMANN
Democracy, Demography and Growth

ECO No. 95/31

Alessandra PELLONI
Nominal Rigidities and Increasing
Returns

ECO No. 95/32

Alessandra PELLONI/Robert
WALDMANN
Indeterminacy and Welfare Increasing
Taxes in a Growth Model with Elastic
Labour Supply

ECO No. 95/33

Jeroen HINLOOPEN/Stephen MARTIN
Comment on Estimation and
Interpretation of Empirical Studies in
Industrial Economics

ECO No. 95/34

M.J. ARTIS/W. ZHANG
International Business Cycles and the
ERM: Is there a European Business
Cycle?

ECO No. 95/35

Louis PHILIPS
On the Detection of Collusion and
Predation

ECO No. 95/36

Paolo GUARDA/Mark SALMON
On the Detection of Nonlinearity in
Foreign Exchange Data

*out of print

ECO No. 95/37
Chiara MONFARDINI
Simulation-Based Encompassing for
Non-Nested Models: A Monte Carlo
Study of Alternative Simulated Cox Test
Statistics

ECO No. 95/38
Tito BOERI
On the Job Search and Unemployment
Duration

ECO No. 95/39
Massimiliano MARCELLINO
Temporal Aggregation of a VARIMAX
Process

ECO No. 95/40
Massimiliano MARCELLINO
Some Consequences of Temporal
Aggregation of a VARIMA Process

ECO No. 95/41
Giovanni NERO
Spatial Multiproduct Duopoly Pricing

ECO No. 95/42
Giovanni NERO
Spatial Multiproduct Pricing: Empirical
Evidence on Intra-European Duopoly
Airline Markets

ECO No. 95/43
Robert WALDMANN
Rational Stubbornness?

ECO No. 95/44
Tilman EHRBECK/Robert
WALDMANN
Is Honesty Always the Best Policy?

ECO No. 95/45
Giampiero M. GALLO/Barbara PACINI
Time-varying/Sign-switching Risk
Perception on Foreign Exchange Markets

ECO No. 95/46
V́ctor GÓMEZ/Agustín MARAVALL
Programs TRAMO and SEATS
Update: December 1995

ECO No. 96/1
Ana Rute CARDOSO
Earnings Inequality in Portugal: High
and Rising?

ECO No. 96/2
Ana Rute CARDOSO
Workers or Employers: Who is Shaping
Wage Inequality?

ECO No. 96/3
David F. HENDRY/Grayham E. MIZON
The Influence of A.W.H. Phillips on
Econometrics

ECO No. 96/4
Andrzej BANIAK
The Multimarket Labour-Managed Firm
and the Effects of Devaluation

ECO No. 96/5
Luca ANDERLINI/Hamid
SABOURIAN
The Evolution of Algorithmic Learning:
A Global Stability Result

ECO No. 96/6
James DOW
Arbitrage, Hedging, and Financial
Innovation

ECO No. 96/7
Marion KOHLER
Coalitions in International Monetary
Policy Games

ECO No. 96/8
John MICKLEWRIGHT/ Gyula NAGY
A Follow-Up Survey of Unemployment
Insurance Exhausters in Hungary

*out of print



